

REMARKS

Claims 1-2 and 5 have been canceled. Claims 3-4 and 6-10 are now pending in the application. Applicant amends claims 3, 7-8, and 10 for further clarification, and refer to Figs. 3A and 3B, and their corresponding description in the specification, for exemplary embodiments of and support for the claimed invention. No new matter has been added.

Applicant, again, acknowledges with appreciation the allowance of claim 6.

Claims 8-9 stand rejected under 35 U.S.C. § 102(c) as being anticipated by United States Patent No. 6,535,562 to Mohseni et al.; claims 3-4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mohseni et al. in view of U.S. Patent No. 5,504,775 to Chouly et al.; claim 7 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Mohseni et al. in view of U.S. Patent No. 6,625,173 to Yanagi, and Chouly et al.; and claim 10 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,882,636 to Kim et al. in view of Mohseni et al., and further in view of “High Speed Radio Communication Technology Using Parallel Combinatory CDMA under Multipath Rayleigh-Fading Interference Environment” by Watanabe et al. Applicant amends claims 3, 7-8, and 10 in a good faith effort to clarify the invention as distinguished from the cited references, and respectfully traverse the rejections.

The Examiner maintained that Figs. 12A-12B and their corresponding description in Mohseni et al. disclose the claimed amplitude control features. Such portions of Mohseni et al. only include, however, description of amplitude reduction precisely for signals that are to be rotated and outputted neither on the I axis nor on the Q axis.

Indeed, the “factor of $\sqrt{2}$ ” cited by the Examiner is directed to the amplitude reduction for signals that are also phase rotated in Mohseni et al.:

“By rotating the complex input signal before it reaches the DACs, an output signal having the same power may be obtained while avoiding spectral degradation. This scheme may

be applied by reducing the amplitude of the input signal by a factor of $\sqrt{2}$ and also phase rotating the signal before inputting it to the DACs. FIG. 12B shows how inputting this signal to the DACs without rotation will cause the output signal to have an amplitude of $(R-1)/\sqrt{2}$. After the signal is rotated, the output of the DACs becomes as shown in FIG. 12C. While a signal of the desired power $R-1$ is obtained as in FIG. 12A, in this case the dynamic range of the DACs is used more efficiently such that the danger of saturation and spectral degradation is greatly reduced. In another implementation, the phase rotator may include the capacity to perform such amplitude compensation internally.” Col. 7, lines 40-55 of Mohseni et al. (Emphasis added)

As such, Mohseni et al., as cited and relied upon by the Examiner, only describe reducing the amplitude component of a signal when it is to be rotated and outputted neither on the I axis nor on the Q axis—as shown in Fig. 12C of Mohseni et al.—and, therefore, fail to disclose or suggest the claimed features of decreasing an amplitude component of a first output signal when the first output signal is output on the I axis or on the Q axis, and not decreasing an amplitude component of a second output signal when the second output signal is output neither on the I axis nor on the Q axis.

Accordingly, Applicant respectfully submits that claim 8 incorporating the aforementioned claim features, together with claim 9 dependent therefrom, is patentable over Mohseni et al. for at least the above-stated reasons.

The Examiner cited Chouly et al., Yanagi, Kim et al., and Watanabe et al. as combining references to specifically address additional features recited in claims 3-4, 7, and 10, respectively. Independent claims 3, 7, and 10 incorporate features that correspond to those of claim 8 described above. As such, combinations with Chouly et al., Yanagi, Kim et al., and Watanabe et al. would still have failed to cure the above-described deficiencies of Mohseni et al., even assuming, arguendo, that such combinations would have been obvious to one skilled in the art at the time the claimed invention was made. Accordingly, Applicant

respectfully submits that claims 3, 7, and 10, together with claim 4 dependent from claim 3, are patentable over the cited references for at least the foregoing reasons.

In view of the remarks set forth above, this application is in condition for allowance which action is respectfully requested. However, if for any reason the Examiner should consider this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Respectfully submitted,

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